



Environmental Division  
Fort Collins, Colorado

# Inorganics Case Narrative

---

## Colorado Oil & Gas Conservation Commission

Complaint 200221032

Work Order Number: 0910289

1. This report consists of 1 water sample.
2. The sample was received cool and intact by ALS on 10/28/09.
3. The sample was prepared for analysis based on Methods for the Chemical Analysis of Waters and Wastes (MCAWW), May 1994 procedures and Environmental Monitoring Systems Laboratory (EMSL) Rev 2.1 procedures.
4. The sample was analyzed following MCAWW and EMSL procedures for the following methods:

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
Alkalinity	310.1	1106 Rev 7
Bicarbonate	310.1	1106 Rev 8
Carbonate	310.1	1106 Rev 8
pH	150.1	1126 Rev 17
Specific conductance	120.1	1128 Rev 9
TSS	160.2	1100 Rev 10
Bromide	300.0 Revision 2.1	1113 Rev 11
Chloride	300.0 Revision 2.1	1113 Rev 11
Fluoride	300.0 Revision 2.1	1113 Rev 11
Nitrate as N	300.0 Revision 2.1	1113 Rev 11
Nitrite as N	300.0 Revision 2.1	1113 Rev 11
Sulfate	300.0 Revision 2.1	1113 Rev 11

5. All standards and solutions were used within their recommended shelf life.
6. The sample was prepared and analyzed within the established hold time for each analysis.

All in house quality control procedures were followed, as described below.



7. General quality control procedures.

- A preparation (method) blank and laboratory control sample (LCS) were prepared and analyzed with the samples in each applicable preparation batch. There were not more than 20 samples in each preparation batch.
- The method blank associated with each applicable batch was below the reporting limit for the requested analytes. This indicates that no contaminants were introduced to the samples during preparation and analysis.
- The LCS was within the acceptance limits for each applicable analysis.
- All initial and continuing calibration blanks (ICB/CCB) associated with each applicable analytical batch were below the reporting limit for the requested analytes with the exception of CCB5 for chloride. The sample bracketed by this CCB contained more than ten times the concentration of chloride that was detected in the CCB.
- All initial and continuing calibration verifications (ICV/CCV) associated with each applicable analytical batch were within the acceptance criteria for the requested analytes. This indicates a valid calibration and stable instrument conditions.

8. Matrix specific quality control procedures.

Per method requirements, matrix QC was performed for each analysis. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

9. Reduced aliquots were taken of the sample for the alkalinity, bicarbonate, and carbonate analysis. Reporting limits were elevated accordingly.

10. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in SOP 939 Revision 3.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Megan Johnson  
Megan Johnson  
Inorganics Primary Data Reviewer

11/10/09  
Date

[Signature]  
Inorganics Final Data Reviewer

11/10/09  
Date



### **Inorganic Data Reporting Qualifiers**

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Concentration qualifier -- If the analyte was analyzed for but not detected a "U" is entered.
- QC qualifier -- Specified entries and their meanings are as follows:
  - N - Spiked sample recovery not within control limits.
  - \* - Duplicate analysis (relative percent difference) not within control limits.
  - Z - Calibration spike recovery not within control limits.

# ALS Laboratory Group -- FC

## Sample Number(s) Cross-Reference Table

---

**Paragon OrderNum:** 0910289

**Client Name:** Colorado Oil & Gas Conservation Commission

**Client Project Name:** Complaint 200221032

**Client Project Number:**

**Client PO Number:** OE PHA 09000000004

---

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Meadows WW	0910289-1		WATER	27-Oct-09	11:14
Trip Blank	0910289-2		WATER	27-Oct-09	



# ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524

TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

## Chain-of-Custody

0910289

Date 27 Oct 2009 Page 1 of 1

Lab ID

Project Name/No.	Sampler(s) <u>Gintautas</u>	Turnaround	Standard or Due <u>Today</u>	Disposal	By Lab or Retu
REPORT TO: <u>Peter Gintautas</u>					
PHONE: <u>719-846-3091</u>					
FAX: <u>719-846-3384</u>					
E-MAIL: <u>peter.gintautas@state.co</u>					
COMPANY: <u>Colo. Oil &amp; Gas. Comm.</u>					
ADDRESS: <u>PO Box 108 Trinidad CO 81082</u>					

Provide additional information as needed in Comments below.						Circle Analytical Method Above													Circle Analytical Method At															
Sample ID	Date	Time	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	TOL	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions	Solids	pH	Perchlorate	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	
<u>Complaint 200221017</u>																																		
<u>Stevens WW</u>	<u>27 Oct</u>	<u>09:30</u>		<u>W</u>	<u>None</u>	<u>1</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>																
<u>Complaint 200221028</u>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>																
<u>Liceno WW</u>	<u>27 Oct</u>	<u>10:35</u>		<u>W</u>	<u>None</u>	<u>3</u>	<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>																
<u>Complaint 200221032</u>	<u>27 Oct</u>			<u>W</u>	<u>None</u>	<u>5</u>	<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>																
<u>Meadows WW</u>	<u>27 Oct</u>	<u>11:14</u>		<u>W</u>	<u>None</u>	<u>3</u>	<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>																
<u>Complaint 200221031</u>							<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>																
<u>Bieber WW</u>	<u>27 Oct</u>	<u>12:06</u>		<u>W</u>	<u>None</u>	<u>3</u>	<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>																

Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = Non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: (Trip blanks + Complaint 200221032) = 8260-25 + tertbutanol / TILCs

Anions = Br, Cl, F, NO<sub>2</sub>, NO<sub>3</sub>, SO<sub>4</sub>

Filter + Preserve metals upon receipt

200.7 = B, Ba, Be, Ca, Cr, Co, Cu, Fe, Li, Mg, Mn, Ni, K, Na, Sr, Zn, Si

200.8 = Sb, As, Cd, Pb, Mo, Se, Ag, Te, U

Relinquished By: (1)	Relinquished By:
Signature <u>Peter Gintautas</u>	Signature _____
Printed Name <u>Peter Gintautas</u>	Printed Name _____
Date <u>27 Oct 09</u> Time <u>16:20</u>	Date _____ Time _____
Company <u>COGCC</u>	Company _____
Received By: (1)	Received By:
Signature <u>Lauren Schmitz</u>	Signature _____
Printed Name <u>Lauren Schmitz</u>	Printed Name _____
Date <u>10/28/09</u> Time <u>10:15</u>	Date _____ Time _____
Company <u>ALS</u>	Company _____

Originator: Retain pink page or a photocopy!

1 trip blanks  
40 mL VCA  
(2)

①

5



CONDITION OF SAMPLE UPON RECEIPT FORM

0910289

Client: COGCC

Workorder No: 0910288 ~~25~~ 10/28/09

Project Manager: AW

Initials: LAS Date: 10/28/09

1. Does this project require any <b>special handling</b> in addition to standard Paragon procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody <b>seals</b> on <b>shipping containers</b> intact?	NONE	<input checked="" type="radio"/> YES	NO
3. Are Custody seals on <b>sample containers</b> intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a <b>COC (Chain-of-Custody)</b> present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the <b>COC and bottle labels</b> complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the <b>COC in agreement</b> with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	<input checked="" type="radio"/> NO *
7. Were <b>airbills / shipping documents</b> present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO <del>25</del> 10/29/09
8. Are all aqueous <b>samples requiring preservation</b> preserved correctly? (excluding volatiles)	N/A	<input checked="" type="radio"/> YES	<input checked="" type="radio"/> NO *
9. Are all aqueous <b>non-preserved samples</b> pH 4-9?	N/A	<input checked="" type="radio"/> YES	NO
10. Is there <b>sufficient sample</b> for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the <b>proper containers</b> for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within <b>holding times</b> for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received <b>intact</b> ? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring <b>no headspace</b> (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? <b>Size of bubble:</b> _____ < green pea _____ > green pea	N/A	<input checked="" type="radio"/> YES	NO
15. Do perchlorate LCMS-MS samples <b>have</b> headspace? (at least 1/3 of container required)	<input checked="" type="radio"/> N/A	YES	NO
16. Were samples checked for and free from the presence of <b>residual chlorine</b> ? (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	<input checked="" type="radio"/> N/A	YES	NO
17. Were the samples <b>shipped on ice</b> ?		<input checked="" type="radio"/> YES	NO
18. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <input checked="" type="radio"/> #2 #4		<input checked="" type="radio"/> YES	NO
Cooler #: <u>1</u> <u>2</u>			
Temperature (°C): <u>2.7°</u> <u>3.8°</u>			
No. of custody seals on cooler: <u>1</u> <u>1</u>			
DOT Survey/Acceptance Information	External µR/hr reading: <u>15</u> <u>15</u>		
	Background µR/hr reading: <u>13</u>		
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES <input type="radio"/> NO / NA (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

\* 2 trip blanks not accounted for on COC - supplemental letter states they are to go with this workorder (sample #2 = 2 trip blanks)

\* metals will be filtered and preserved by the lab (prior to analysis)

If applicable, was the client contacted? YES / NO  NA Contact: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager Signature / Date: [Signature] 11/2/09

\*IR Gun #2: Oakton, SN 29922500201-0066

\*IR Gun #4: Oakton, SN 2372220101-0002

# BICARBONATE AS CaCO3

Method EPA310.1

## Sample Results

Lab Name: ALS Laboratory Group -- FC

Client Name: Colorado Oil & Gas Conservation Commission

Client Project ID: Complaint 200221032

Work Order Number: 0910289

Final Volume: 100 ml

Reporting Basis: As Received

Matrix: WATER

Prep Method: NONE

Result Units: MG/L

---

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
Meadows WW	0910289-1	10/27/2009	11/02/2009	11/02/2009	N/A	1	230	20		25 ml

### Comments:

---

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0910289-1*

---

Date Printed: Monday, November 09, 2009

ALS Laboratory Group -- FC

Page 1 of 3

LIMS Version: 6.307A

# CARBONATE AS CaCO3

Method EPA310.1

## Sample Results

Lab Name: ALS Laboratory Group -- FC

Client Name: Colorado Oil & Gas Conservation Commission

Client Project ID: Complaint 200221032

Work Order Number: 0910289

Final Volume: 100 ml

Reporting Basis: As Received

Matrix: WATER

Prep Method: NONE

Result Units: MG/L

---

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
Meadows WW	0910289-1	10/27/2009	11/02/2009	11/02/2009	N/A	1	20	20	U	25 ml

### Comments:

---

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0910289-1*

---

# TOTAL ALKALINITY AS CaCO3

Method EPA310.1

## Sample Results

Lab Name: ALS Laboratory Group -- FC

Client Name: Colorado Oil & Gas Conservation Commission

Client Project ID: Complaint 200221032

Work Order Number: 0910289

Final Volume: 100 ml

Reporting Basis: As Received

Matrix: WATER

Prep Method: NONE

Result Units: MG/L

---

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
Meadows WW	0910289-1	10/27/2009	11/02/2009	11/02/2009	N/A	1	230	20		25 ml

### Comments:

---

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0910289-1*

---

# pH

## Method EPA150.1

### Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Field ID:	Meadows WW
Lab ID:	0910289-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 27-Oct-09

Date Extracted: 30-Oct-09

Date Analyzed: 30-Oct-09

Prep Method: NONE

Prep Batch: PH091030-1

QCBatchID: PH091030-1-1

Run ID: ph091030-1a

Cleanup: NONE

Basis: As Received

File Name:

Sample Aliquot: 20 ml

Final Volume: 20 ml

Result Units: pH

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-29-7	PH	1	8.1	0.1		

Data Package ID: *ph0910289-1*

# Specific Conductance in Water

## Method EPA120.1

### Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Field ID:	Meadows WW
Lab ID:	0910289-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 27-Oct-09

Date Extracted: 30-Oct-09

Date Analyzed: 30-Oct-09

Prep Method: NONE

Prep Batch: SC091030-1

QCBatchID: SC091030-1-1

Run ID: sc091030-1a

Cleanup: NONE

Basis: As Received

File Name:

Sample Aliquot: 45 ml

Final Volume: 45 ml

Result Units: umhos/cm

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-34-4	SPECIFIC CONDUCTIVITY	1	441	1		

Data Package ID: sc0910289-1

# Total Suspended Solids

## Method EPA160.2

### Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Field ID:	Meadows WW
Lab ID:	0910289-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 27-Oct-09

Date Extracted: 30-Oct-09

Date Analyzed: 02-Nov-09

Prep Method: METHOD

Prep Batch: TS091030-1

QCBatchID: TS091030-1-1

Run ID: ts091102-1a

Cleanup: NONE

Basis: As Received

File Name: Manual Entry

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-32-2	TOTAL SUSPENDED SOLIDS	1	20	20	U	

Data Package ID: *ts0910289-1*

# Ion Chromatography

## Method EPA300.0 Revision 2.1

### Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Field ID:	Meadows WW
Lab ID:	0910289-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 27-Oct-09

Date Extracted: 28-Oct-09

Date Analyzed: 29-Oct-09

Prep Method: NONE

Prep Batch: IC091028-1

QCBatchID: IC091028-1-1

Run ID: IC091028-1A

Cleanup: NONE

Basis: As Received

File Name: 91028\_076.DXD

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
16984-48-8	FLUORIDE	1	1.6	0.1		
16887-00-6	CHLORIDE	1	13	0.2		
14797-65-0	NITRITE AS N	1	0.1	0.1	U	
24959-67-9	BROMIDE	1	0.2	0.2	U	
14797-55-8	NITRATE AS N	1	0.2	0.2	U	
14808-79-8	SULFATE	1	4.5	1		

Data Package ID: *ic0910289-1*

# BICARBONATE AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: AK091102-2MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK091102-2

QCBatchID: AK091102-2-1

Run ID: ak091102-1a

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK091102-2MB	11/2/2009	11/02/2009	N/A	1	5	5	U

## Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: ak0910289-1

Date Printed: Monday, November 09, 2009

ALS Laboratory Group -- FC

Page 1 of 3

LIMS Version: 6.307A

# CARBONATE AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: AK091102-2MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK091102-2

QCBatchID: AK091102-2-1

Run ID: ak091102-1a

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK091102-2MB	11/2/2009	11/02/2009	N/A	1	5	5	U

## Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: ak0910289-1

Date Printed: Monday, November 09, 2009

ALS Laboratory Group -- FC

Page 2 of 3

LIMS Version: 6.307A

# TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: AK091102-2MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK091102-2

QCBatchID: AK091102-2-1

Run ID: ak091102-1a

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK091102-2MB	11/2/2009	11/02/2009	N/A	1	5	5	U

## Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: ak0910289-1

Date Printed: Monday, November 09, 2009

ALS Laboratory Group -- FC

Page 3 of 3

LIMS Version: 6.307A

# TOTAL ALKALINITY AS CaCO3

Method EPA310.1

## Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: AK091102-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 11/02/2009

Date Analyzed: 11/02/2009

Prep Batch: AK091102-2

QCBatchID: AK091102-2-1

Run ID: ak091102-1a

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
	TOTAL ALKALINITY AS CaCO3	100	99.1	5		99	85 - 115

Data Package ID: ak0910289-1

Date Printed: Monday, November 09, 2009

ALS Laboratory Group -- FC

Page 1 of 1

LIMS Version: 6.307A

# Total Suspended Solids

Method EPA160.2

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: TS091030-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 30-Oct-09

Date Analyzed: 02-Nov-09

Prep Method: METHOD

Prep Batch: TS091030-1

QCBatchID: TS091030-1-1

Run ID: ts091102-1a

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 500 ml

Final Volume: 500 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-32-2	TOTAL SUSPENDED SOLIDS	1	4	4	U	

Data Package ID: *ts0910289-1*

Date Printed: Monday, November 09, 2009

ALS Laboratory Group -- FC

Page 1 of 1

LIMS Version: 6.307A

# Total Suspended Solids

Method EPA160.2

## Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: TS091030-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 10/30/2009

Date Analyzed: 11/02/2009

Prep Method: METHOD

Prep Batch: TS091030-1

QCBatchID: TS091030-1-1

Run ID: ts091102-1a

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-32-2	TOTAL SUSPENDED SOLIDS	600	574	20		96	85 - 115%

Data Package ID: *ts0910289-1*

Date Printed: Monday, November 09, 2009

ALS Laboratory Group -- FC

Page 1 of 1

LIMS Version: 6.307A

# Ion Chromatography

Method EPA300.0 Revision 2.1

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: IC091028-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 28-Oct-09

Date Analyzed: 29-Oct-09

Prep Method: NONE

Prep Batch: IC091028-1

QCBatchID: IC091028-1-1

Run ID: IC091028-1A

Cleanup: NONE

Basis: N/A

File Name: 91028\_070.DXD

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
16984-48-8	FLUORIDE	1	0.1	0.1	U	
16887-00-6	CHLORIDE	1	0.2	0.2	U	
14797-65-0	NITRITE AS N	1	0.1	0.1	U	
24959-67-9	BROMIDE	1	0.2	0.2	U	
14797-55-8	NITRATE AS N	1	0.2	0.2	U	
14808-79-8	SULFATE	1	1	1	U	

Data Package ID: ic0910289-1

Date Printed: Monday, November 09, 2009

ALS Laboratory Group -- FC

Page 1 of 1

LIMS Version: 6.307A

# Ion Chromatography

Method EPA300.0 Revision 2.1

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: IC091028-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 10/28/2009

Date Analyzed: 10/29/2009

Prep Method: NONE

Prep Batch: IC091028-1

QCBatchID: IC091028-1-1

Run ID: IC091028-1A

Cleanup: NONE

Basis: N/A

File Name: 91028\_071.DXD

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
16984-48-8	FLUORIDE	2.5	2.5	0.1		100	90 - 110%
16887-00-6	CHLORIDE	5	4.92	0.2		98	90 - 110%
14797-65-0	NITRITE AS N	2	2.01	0.1		101	90 - 110%
24959-67-9	BROMIDE	5	5	0.2		100	90 - 110%
14797-55-8	NITRATE AS N	5	4.86	0.2		97	90 - 110%
14808-79-8	SULFATE	25	24.8	1		99	90 - 110%

Data Package ID: *ic0910289-1*

Date Printed: Monday, November 09, 2009

ALS Laboratory Group -- FC

Page 1 of 1

LIMS Version: 6.307A